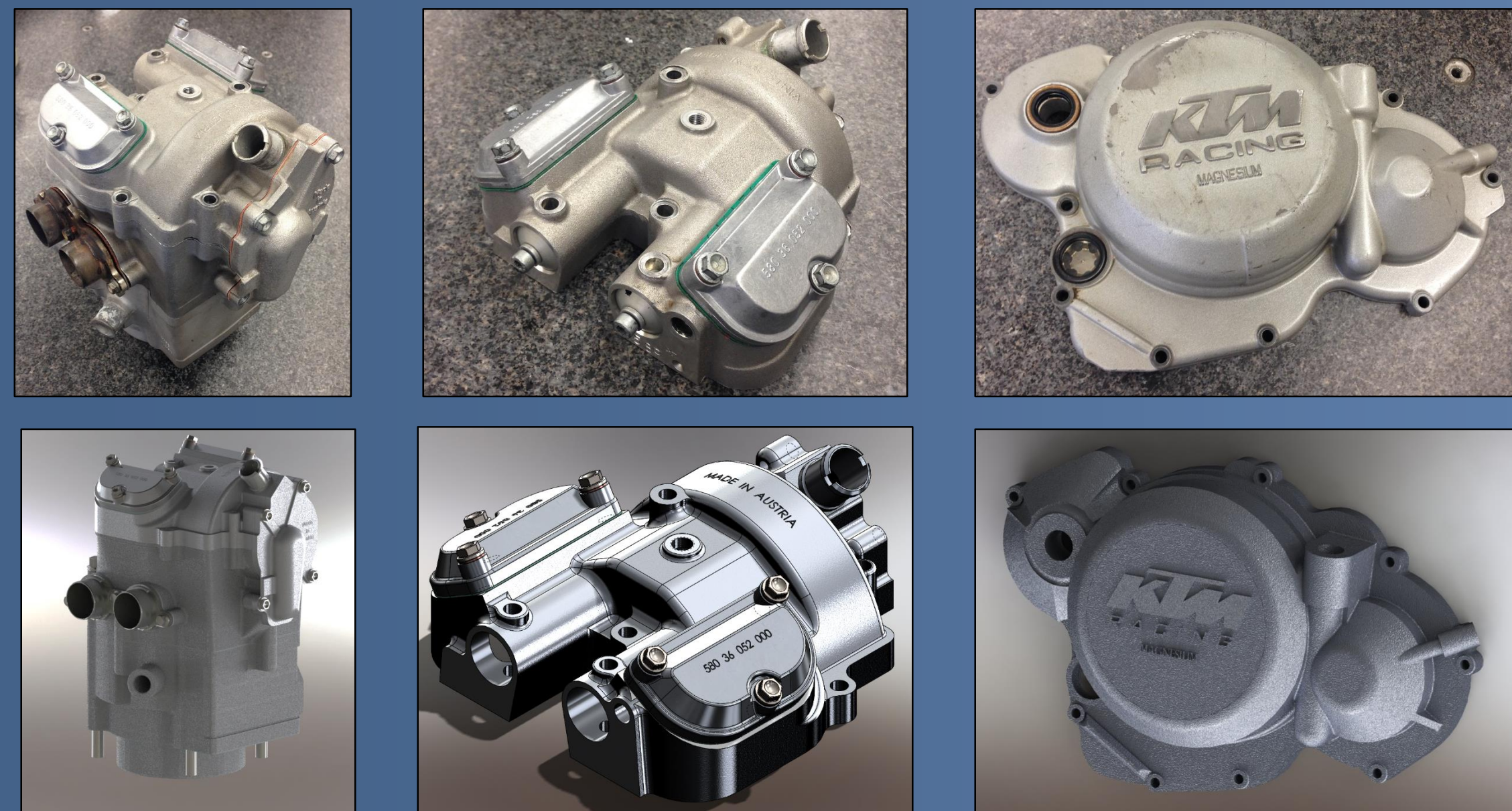


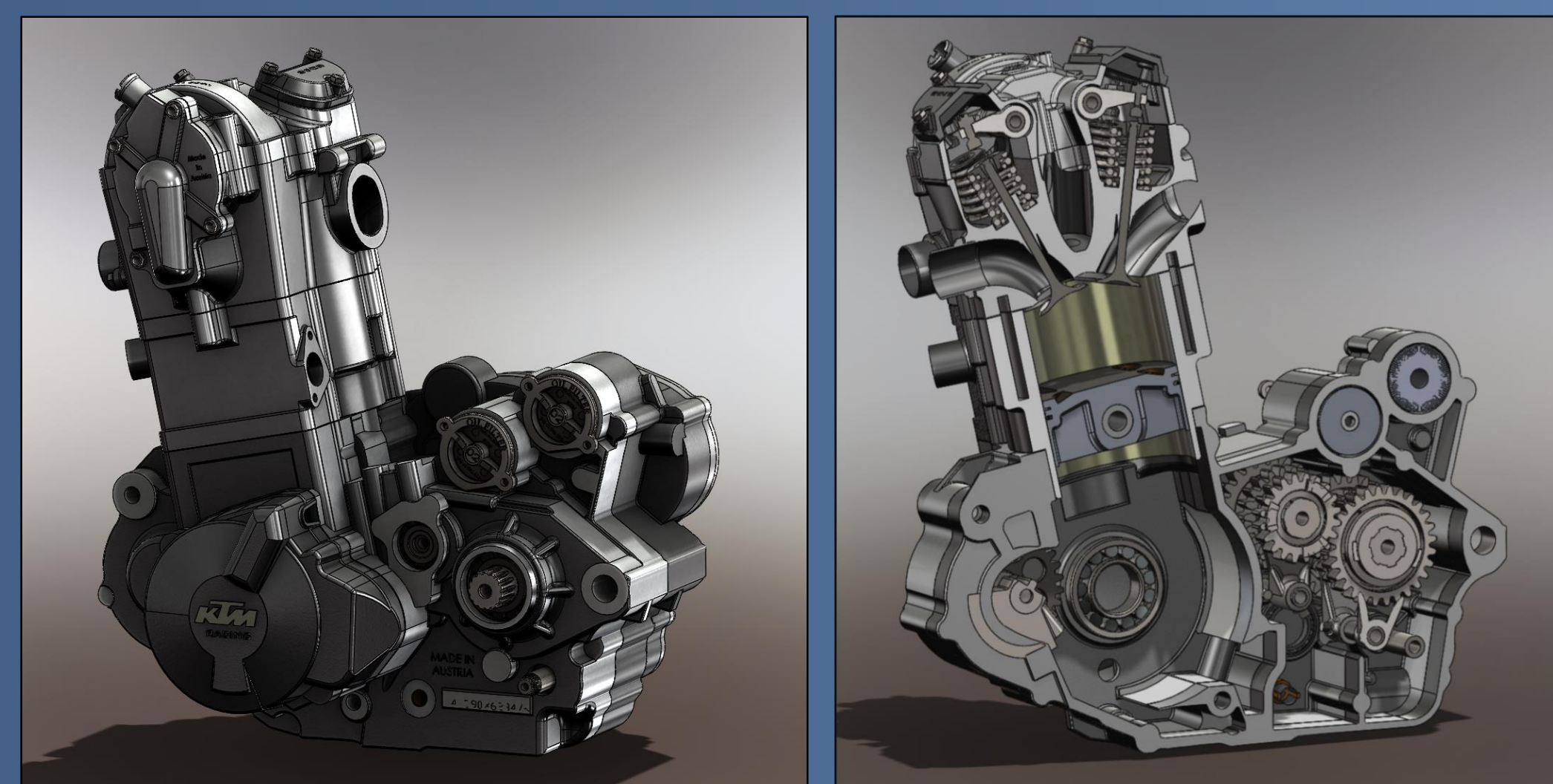
## Problem Statement

Repackage a KTM 540 SX motorcycle engine into a compact, innovative drivetrain design to be used in the next generation formula car

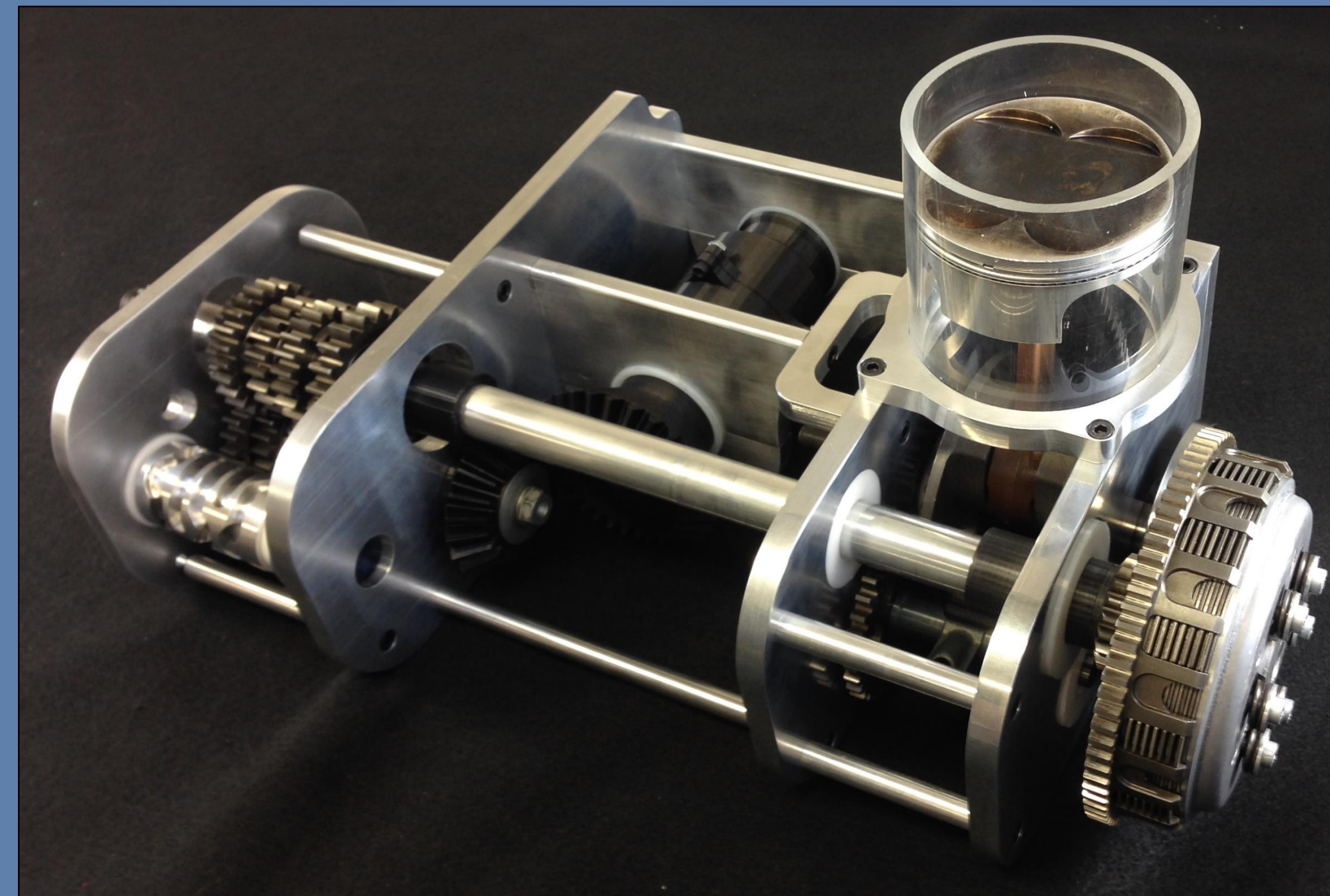


### 1<sup>st</sup> Semester Goals

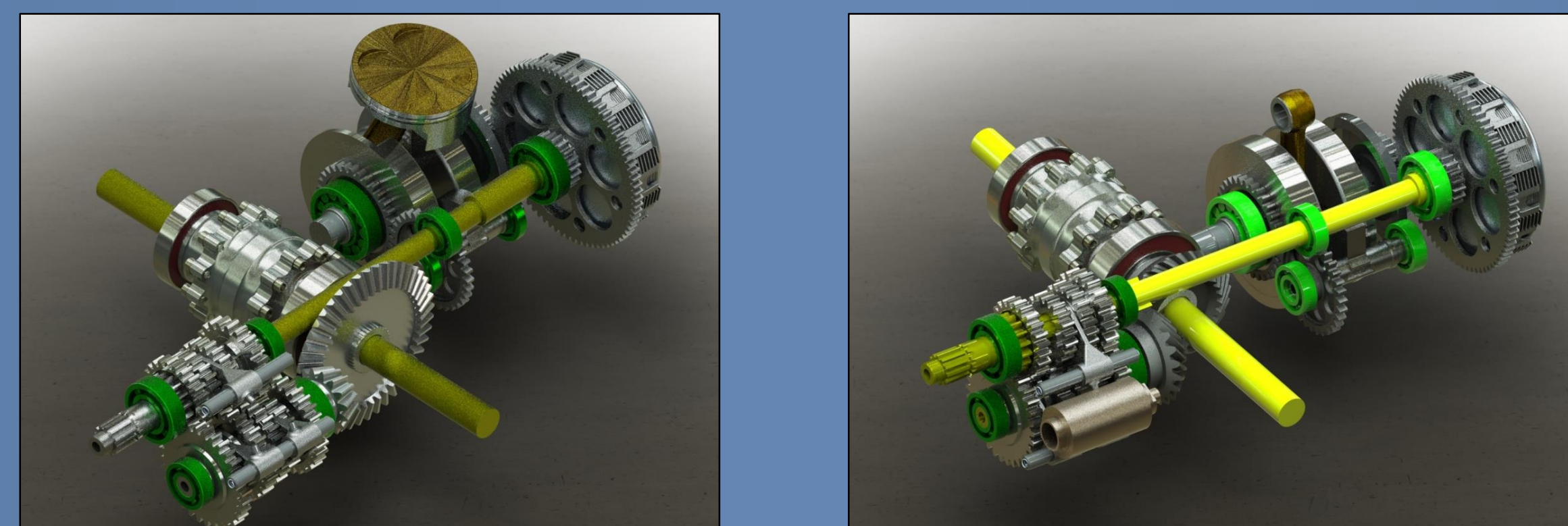
- Construct a CAD model of the KTM engine in SolidWorks using DesignWorkz and metrology tools
- Reverse engineer KTM machine components and system layout



## Next Generation FSAE Power Plant Design



Prototype

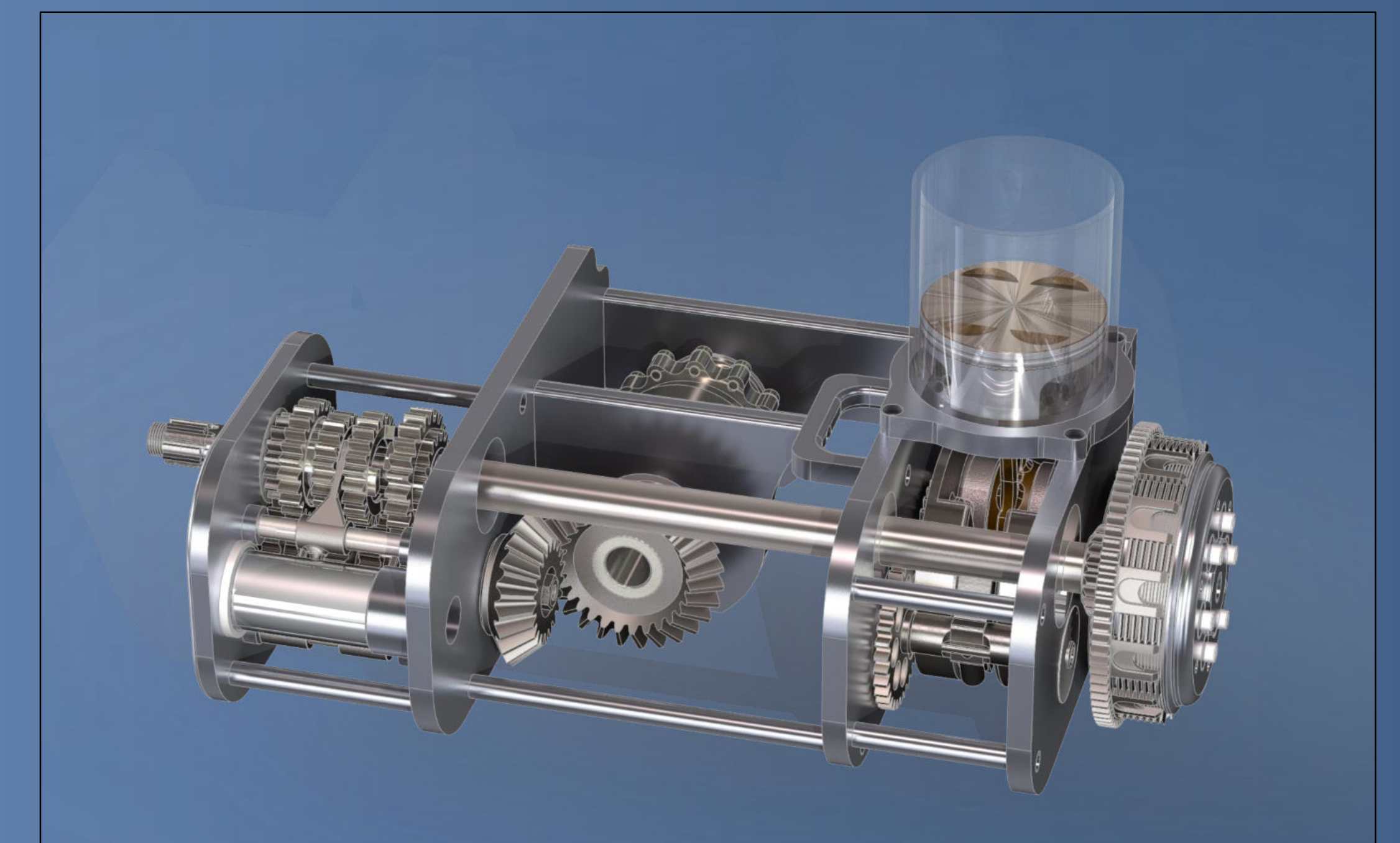


### 2<sup>nd</sup> Semester Goals

- Apply project learning from KTM engine to design a new drivetrain for the Formula SAE competition
- Utilize internal ring and pinion gear system to transfer power to differential
- Determine final drive gear ratio for optimum power and speed

## Final Design

- Optimized for smallest footprint
- Divorced transmission and final drive allow for integrated suspension mounting on case
- Gear driven ring and pinion with limited-slip differential



## Manufacturing

